

**REMARKS**

Claims 1, 2 and 9-15 are pending in this application. By this Amendment, claim 9 is amended. No new matter is added by this amendment. Reconsideration of the application based on the above amendment and the following remarks is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution; and (c) place the application in better form for appeal, should an appeal be necessary. The amendment is necessary and was not earlier presented because it is made in response to arguments raised in the final rejection. Entry of the amendment is thus respectfully requested.

The Office Action rejects claims 6, 7, 13, 14, 18 and 19 under 35 U.S.C. §112, second paragraph, as being indefinite. The cancellation of claim 3 renders this rejection moot.

The Office Action rejects claims 3-5, 8, 16, 17 and 20 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,459,391 to Haynos; rejects claims 3-15 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,210,462 to Tourneux; rejects claims 6, 7 and 9-15 under 35 U.S.C. §103(a) as being unpatentable over Haynos in view of Tourneux; rejects claims 16-20 under 35 U.S.C. §103(a) as being unpatentable over Tourneux in view of Haynos; rejects claims 3-6, 8-10, 12, 13 and 15 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,498,297 to O'Neill; rejects claims 7, 11 and 14 under 35 U.S.C. §103(a) as being unpatentable over O'Neill in view of Tourneux; rejects claims 16-18 and 20 under 35 U.S.C. §103(a) as being unpatentable over O'Neill in view of Haynos; and rejects claim 19 under 35 U.S.C. §103(a) as being unpatentable over O'Neill in view of Haynos, and further in view of Tourneux. Applicants respectfully traverse these rejections.

The cancellation of claims 3-8 and 16-20 renders the rejection of these claims moot.

The Office Action asserts that Haynos teaches all of the features recited in the pending claims. However, Haynos does not teach, nor would it have suggested, that a lower surface thereof (solar cell) is located below a surface of said heat dissipating layer. Instead, Haynos teaches, as illustrated in Fig. 3, that the heat dissipating layer 23 is disposed entirely below the solar cell 12 of the solar cell assembly. This is in direct contrast to the subject matter of the amended claims, as illustrated in Fig. 12B, which recite that the "a lower surface thereof (solar cell 30) is located below a surface of said heat dissipating layer (34A and B)."

With respect to the Tourneux reference the Office Action improperly identifies the adhesive layer 19 as being two layers, *i.e.*, a bottom adhesive and a sealing layer of transparent resin. This assertion is made based on impermissible hindsight so as to satisfy the requirements for a rejection under 35 U.S.C. §102(b). Tourneux never identifies the adhesive 19 as anything but an adhesive. The specific paragraph referred to by the Office Action merely discloses that the adhesive is transparent, and not that it is a "second layer," as positively recited in the pending claims. However, the reference arguably teaches that the adhesive 19 permits a favorable dissipation of the heat produced by absorption of the radiation in the cell to the plates. Therefore, one skilled in the art would not interpret the adhesive of Tourneux as corresponding to the two distinct layers of the heat dissipating layer, layers 34a and 34b, as illustrated in Fig. 12B of the Applicants' disclosure, and as positively recited in the pending claims.

Furthermore, with respect to Tourneux, one skilled in the art would interpret adhesive layer 19 as being one layer, which, as illustrated by Fig. 1, shows that what is asserted to be the heat dissipating layer 19 covers an upper surface thereof (solar cell), therefore, it cannot reasonably be considered to teach "an upper surface thereof receiving light is not covered by said heat dissipating layer, as recited in the pending claims. Therefore, one skilled in the art

would not reasonably consider Tourneux as teaching all of the features of the pending claims as asserted in the Office Action.

Additionally, the Office Action states, referring to the description from column 2, lines 58-68, and column 3, lines 1-4, that the adhesive of Tourneux is comprised of the material selected from the group consisting of thermoplastic resin. This description can be summarized as the inset plate 16 consists of a transparent material selected from polyesters, methacrylates, epoxy resin, silicone rubbers, epoxy acrylate resins, and polyester acrylate resins, and the adhesive 19 is a synthetic resin selected from the above mentioned materials for the inset plate. As such, Tourneux merely discloses the transparent property, and not a non-thermoplastic material a modulus of elasticity or coefficient of viscosity of which is lowered below that of said first layer during a rise of a temperature of the non-thermoplastic material within a predetermined range in the process of heating of the material to cure the non-thermoplastic material, as positively recited in the pending claims.

The subject matter of the pending claims recites that the first layer and the second layer of the heat dissipating layer have different properties. That is, the second layer is formed of a non-thermoplastic material the modulus of elasticity or coefficient of viscosity of which is lowered below that of the first layer during the temperature rise within the predetermined range upon heating of the material. Selection of the non-thermoplastic material considers at least the manufacturing process and the high temperature conditions experienced in a photovoltaic electric generator. That is, if the second layer temporarily softens in the predetermined temperature range during manufacturing, it non-reversibly hardens and does not soften again even under the further temperature rise. As such, upon the manufacturing of the photovoltaic electric generator, by maintaining the insulating characteristic between the base plate and the solar cell, the solar cell can be disposed as close as possible to the base plate. Further, during usage under high temperature conditions, after

manufacturing the solar cell, the cell is held in the state where the second layer is softened, so that the thermal expansion influence of the base plate to the solar cell can be minimized, thereby preventing the solar cell from being damaged. During this period, the first layer acts as the shock absorber.

Regarding the O'Neill reference, the Office Action asserts that O'Neill teaches all of the features recited in the subject matter of canceled claim 3, which has been incorporated into pending amended claim 9, and claim 9. This is incorrect for the following reasons.

First, the Office Action asserts that it would have been obvious to one skilled in the art that part of the assembly 6 of O'Neill will be "embedded" within the lower pressure sensitive layers 42 because of the pressure exerted from the upper cell package 6. However, O'Neill does not teach, nor would it have suggested, "such that side surfaces thereof is covered by said heat dissipating layer," as positively recited in amended claim 9. Instead, the Office Action asserts that O'Neill makes an indentation into the lower pressure sensitive layer, and not that it covers the sides.

Second, O'Neill does not teach, as discussed above with respect to Tourneux, that "said second layer being formed of a non-thermoplastic material a modulus of elasticity or coefficient of viscosity of which is lowered below that of said first layer during a rise of a temperature of the non-thermoplastic material within a predetermined range in the process of heating of the material to cure the non-thermoplastic material," as positively recited in pending claim 9.

For at least the above reasons, Haynos, Tourneux and/or O'Neill, in any permissible combination, cannot reasonably be considered to teach, or to have suggested, the combinations of all of the features recited in at least independent claim 9. Further, claims 1, 2 and 10-15 would also not have been suggested by the applied prior art references for at least

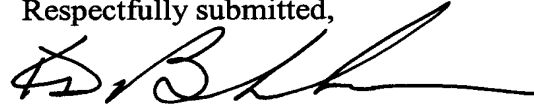
the respective dependence of these claims on allowable independent claim 9, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the rejections of claims 1, 2 and 9-15 under 35 U.S.C. §102 and §103 as being unpatentable over the combination of applied prior art references are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2 and 9-15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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